U.S.S.N. 10/747,715 Attorney Docket No. 133658-2 Page 2 of 7

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Listing of claims:

1-57 (Cancelled)

58. (Amended) A method of assessing an amyloid-related <u>Alzheimer's</u> disease comprising:

administering to a subject an imaging agent that binds to a soluble Abeta and is labeled for detection, wherein the imaging agent comprises

of the imaging agent bound to soluble A-beta.

- 59. (Previously presented) A method as in claim 58, wherein the soluble A-beta is selected from monomeric A-beta peptides, dimeric A-beta peptides, trimeric A-beta peptides, oligomers of up to 24 A-beta peptides, and combinations thereof.
- 60. (Previously presented) A method as in claim 59, wherein the soluble A-beta peptides of A-beta is selected from A-beta 1-38, A-beta 1-39, A-beta 1-40, A-beta 1-41, A-beta 1-42, A-beta 1-43, and combinations thereof.
- 61. (Previously presented) A method as in claim 58, wherein the soluble A-beta does not exhibit green birefringence when stained by Congo red.
- 62. (Cancelled)

U.S.S.N. 10/747,715 Attorney Docket No. 133658-2 Page 3 of 7

- 63. (Previously presented) A method as in claim 58, wherein the imaging agent is labeled with a radioisotope, a paramagnetic particle, an optical particle, and combinations thereof.
- 64. (Previously presented) A method as in claim 63, wherein the imaging agent is labeled with a radioisotope selected from 3H, 11C, 14C, 18F, 32P, 35S, 123I, 125I, 131I 51Cr, 36Cl, 57Co, 59Fe, 75Se, 152Eu, and combinations thereof.
- 65. (Previously presented) A method as in claim 58, wherein the imaging agent is labeled with a paramagnetic particle selected from 157Gd, 55Mn, 162 Dy, 52Cr, 56Fe, and combinations thereof.
- 66. (Previously presented) A method as in claim 58, wherein the imaging agent comprises an optical label selected from a fluorophore, a chemiluminescent entity, and combinations thereof.
- 67. (Previously presented) A method as in claim 58, wherein the step of non-invasive detection comprises generating and analyzing an image using a technique selected from positron emission tomography, magnetic resonance imaging, optical imaging, single photon emission computed tomography, ultrasound, and x-ray computed tomography.
- 68. (Previously presented) A method as in claim 58, wherein the step of non-invasive detection further comprises measuring the amount of imaging agent bound to soluble A-beta.
- 69. (Amended) A method of assessing an amyleid-related Alzheimer's disease comprising:

administering to a subject having or suspected of having <u>Alzheimer's an</u> amyloid-related-disease, an imaging agent comprising

U.S.S.N. 10/747,715 Attorney Docket No. 133658-2 Page 4 of 7

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GE PATENT AND LEGAL

specifically binds to a soluble beta-amyloid and is labeled to emit a detectable signal; and

non-invasively detecting the imaging agent bound to A-beta.

70. (Previously presented) A method as in claim 69, wherein the soluble A-beta is selected from monomeric A-beta peptides, dimeric A-beta peptides, trimeric Abeta peptides, oligomers of up to 24 A-beta peptides, and combinations thereof.

71. (Previously presented) A method as in claim 69, wherein the soluble A-beta is selected from A-beta 1-38, A-beta 1-39, A-beta 1-40, A-beta 1-41, A-beta 1-42, A-beta 1-43, and combinations thereof.

72. (Cancelled)

73. (Previously presented) A method as in claim 69, wherein the imaging agent comprises a label selected from a radioisotope, a paramagnetic particle, and an optical particle.

74. (Previously presented) A method as in claim 69, wherein the imaging agent comprises a label selected from 3H, 11C, 14C, 18F, 32P, 35S, 123I, 125I, 131I 51Cr, 36Cl, 57Co, 59Fe, 75Se, 152Eu, and combinations thereof.

75. (Previously presented) A method as in claim 69, wherein the imaging agent comprises a label selected from 157Gd, 55Mn, 162 Dy, 52Cr, 56Fe, and combinations thereof.

GE PATENT AND LEGAL

U.S.S.N. 10/747,715 Attorney Docket No. 133658-2 Page 5 of 7

76. (Previously presented) A method as in claim 69, wherein the imaging agent comprises an optical label selected from a fluorophore and a chemiluminescent entity.

77. (Cancelled)

- 78. (Previously presented) A method as in claim 69, wherein the step of detecting comprises noninvasively measuring the level of the imaging agent within the subject.
- 79. (Previously presented) A method as in claim 69, wherein the step of non-invasive detection comprises generating and analyzing an image using a technique selected from positron emission tomography, magnetic resonance imaging, optical imaging, single photon emission computed tomography, ultrasound, and x-ray computed tomography.
- 80. (Previously presented) A method as in claim 69, wherein the step of non-invasive detection further comprises measuring the amount of imaging agent bound to soluble A-beta.
- 81. (Amended) The method of claims <u>57-80 58-61, 63-71, 73-76, and 78-80</u>, wherein the imaging agent comprises: